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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/767,742

01/30/2004

Tae-Eun Park

103-1003

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01/25/2007

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EXAMINER

NGUYEN, CUONG H

ART UNIT

PAPER NUMBER

3661

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

01/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/767,742

Applicant(s)

PARK, TAE-EUN

Examiner

CUONG H. NGUYEN

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the IDS filed on 1/30/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/30/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Status of the claims

1. Claims 1-14 are currently pending.

Priority

2. This application has a KR priority dated 10/14/2003.

Drawing

3. This application has been filed with 5 sheets of formal drawings, and they are accepted for examinations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 1, 5, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summerville et al. (US Pat. 5,280,431).**

- Summerville et al. disclose an environment where at least 2 AGVs work under an automated guided vehicle control system, comprising:

- 2 AGVs operated on a single guide path (see Summerville et al., col. 2 lines 4-22);

- a host computer to send commands and receive sensor signals from AGVs (see Summerville et al., Fig. 2a, ref. 11 "HOST COMPUTER");

- Summerville et al.'s reference does not cite that a host computer to transmit a conveyance request to move articles from a predetermined loading location to a predetermined unloading location using one of the automated guided vehicles; and a control unit to assign work to one of the automated guided vehicles waiting for work according to the conveyance request from the host computer and to move the automated guided vehicle waiting for work to a working location thereof whenever it is determined that simultaneous movements of the automated guided vehicle waiting for work and an automated guided vehicle already moving to a working location are possible without interference between the two automated guided vehicles.

However, these claimed details are obviously what are the tasks of teaching AGVs since they are robots that receiving commands, work on those tasks, and making the next moves from what already programmed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Summerville et al. to suggest the claimed details (i.e., *"a host computer to transmit a conveyance request to move articles from a predetermined loading location to a predetermined unloading location using one of the automated guided vehicles; and a control unit to assign work to one of the automated guided vehicles waiting for work according to the conveyance request from the host computer and to move the automated guided vehicle waiting for work to a working location thereof whenever it is determined that simultaneous movements of the automated guided vehicle waiting for work and an automated guided vehicle already moving to a working location possible without interference between the two AGVs"* because those claimed tasks are

familiar works that have been performed by a robot such as an AGV for the advantage of avoiding collisions between 2 AGVs on a single guided path, and creating a safe, and error-free environment.

5. Claims 2, 6, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summerville et al. (US Pat. 5,280,431).

- Summerville et al. also teach a control unit determines whether simultaneous movements are possible based on current locations and working locations of two AGVs and moving directions of those AGVs (see Summerville et al., col. 2 lines 4-22; and col. 2 lines 45-52);

6. Claims 3, 7, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summerville et al. (US Pat. 5,280,431).

- Summerville et al. suggest that a control system determines that the simultaneous movements are possible (see Summerville et al., col. 5 lines 15-17 where AGVs moving along a path is concerned).

- Summerville et al. do not disclose about a **distance** between the working locations is longer than a predetermined distance.

- However, the length of a distance within a working area already being measured and being stored in a host computer; it is obvious to compare a working location to an AGV with that stored number to know a difference.

- It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Summerville et al. to disclose about a **distance** between the working locations is longer than a predetermined distance for the intelligent robot of Summerville et al. react appropriately since its host computer could perform multiple

tasks in a very short duration, i.e., determining a distance if it is bigger or smaller or equal to a predetermined distance..

7. **Claims 4, 8, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summerville et al. (US Pat. 5,280,431), in view of Zeitler et al. (US Pat. 6,799,099).**

The rationales and reference for rejection of claim 12 are incorporated.

Summerville et al. do not disclose about a control unit moves an AGV waiting for work to a location spaced apart by a predetermined distance from the working location if it is determined that the simultaneous movements are impossible.

However, Zeitler et al. suggest that an AGV may be programmed to either stop and wait until the obstruction is removed, or to follow an alternate route to avoid the obstacle (see Zeitler et al., col. 15 lines 20-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Summerville et al. with Zeitler et al. to disclose about a control unit moves an AGV being waiting for work to a location spaced apart by a predetermined distance from a working location if it is determined that simultaneous movements are impossible because Zeitler et al. provide a controller to determine a flexibility between AGVs with an increased safety feature.

Conclusion

8. Claims 1-14 are not patentable.

9. The prior art made of record, which are listed in PTO-892, and not relied upon are considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the

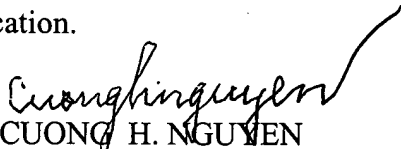
Serial Number: 10/767,742
Art Unit 3661

examiner should be directed to CUONG H. NGUYEN whose telephone number is 571-272-6759. The examiner can normally be reached on 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THOMAS G. BLACK can be reached on 571-272-6956. The Rightfax number for the organization where this application is assigned is 571-273-6759.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Please provide support, with page and line numbers, for any amended or new claim in an effort to help advance prosecution; otherwise any new claim language that is introduced in an amended or new claim may be considered as new matter, especially if the Application is a Jumbo Application.


CUONG H. NGUYEN
Primary Examiner
Art Unit 3661